AMENDMENTS TO THE CLAIMS

This listing of claims replaces all prior versions of claims in the application.

1 (Currently Amended). A modified electroconductive polymer material comprising

an electroconductive polymer; and

a metal oxide filled in a space between ~~the~~ chains of ~~an~~ said electroconductive polymer,

said metal being oxidized through a ~~chemical~~ galvanic corrosion reaction between three substances consisting of ~~said~~ a metal, a cation radical/dication in the electroconductive polymer, and absorbed water, said metal having a work function less than that of the electroconductive polymer.

2 (Original): The modified electroconductive polymer material as defined in claim 1, wherein said metal is one selected from the group consisting of aluminum, titanium, indium, cadmium, manganese, iron, copper, silver, tin, antimony, lead, sodium and calcium.

3 (Currently Amended): A method for producing the modified electroconductive polymer material as defined in claim 1, comprising the steps of[[:]]:

allowing an electroconductive polymer and a metal having a work function less than that of said electroconductive polymer to be brought into contact with one another; ~~and~~

keeping the contact between said metal and said electroconductive polymer, under the presence of absorbed water, so as to create the state of coexistence and forming a galvanic

battery between three substances consisting of said metal, a cation radical/dication in the electroconductive polymer and said absorbed water; and

entering a formed metal oxide/hydroxide into the electroconductive polymer, and diffusingly moving therein to reside in nano-space between chains of said electroconductive polymer.

4 (Currently Amended): The method as defined in claim 3, wherein said step of allowing said electroconductive polymer said metal to be brought into contact with one another includes:

forming on a substrate a film made of an electroconductive polymer; ~~and~~

vapor-depositing on a surface of said film a metal having a work function less than that of said electroconductive polymer; and

penetrating the absorbed water into the electroconductive polymer through the microvoid, micro-scratch or pinhole.

Claim 5 (New). The electroconductive polymer material of claim 1, where said metal oxide is at least one selected from one the group consisting of aluminium oxide, titanium oxide, indium oxide, cadmium oxide, manganese oxide, iron oxide, copper oxide, silver oxide, tin oxide, antimony oxide, lead oxide, sodium oxide and calcium oxide.

Claim 6 (New). The electroconductive polymer material of claim 1, where said metal oxide is at least one selected from one the group consisting of aluminium oxide and indium oxide.

Claim 7 (New). The electroconductive polymer material of claim 1, where said metal oxide is indium oxide.

Claim 8 (New). The electroconductive polymer material of claim 1, further comprising a metal hydroxide filled in a space between chains of said electroconductive polymer.

Claim 9 (New). The electroconductive polymer material of claim 1, wherein said electroconductive polymer has a thickness of about 1 μm or less.

Claim 10 (New). The method as defined in claim 3, further comprising a reducing reaction induced by adding a negative ion.

Claim 11 (New). The method as defined in claim 10, wherein said negative ion is at least one selected from the group consisting of ClO_4^-, BF_4^-, PF_6^- and para-toluene sulfonate ion.

Claim 12 (New). The method as defined in claim 3, wherein said metal is contacted with said electroconductive polymer in an inhomogeneous pattern.

Claim 13 (New). The method as defined in claim 3, wherein said metal contacted with said electroconductive polymer has a structural defect.

Claim 14 (New). The method as defined in claim 13, wherein said structural defect is at least one selected from the group consisting of a micro-void, micro-scratch and a pinhole.

Claim 15 (New). The method as defined in claim 3, wherein said metal is brought into contact with said electroconductive polymer by a deposition process selected from the group

consisting of vapor deposition, a sputtering process, a plating process, an electrodeposition process and an electron beam process.